

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

§ 50.34 Contents of applications; technical information

(a) *Preliminary safety analysis report.* Each application for a construction permit shall include a preliminary safety analysis report. The minimum information⁵ to be included shall consist of the following:

(f) *Additional TMI-related requirements.* In addition to the requirements of paragraph (a) of this section, each applicant for a light-water-reactor construction permit or manufacturing license whose application was pending as of February 16, 1982 shall meet the requirements in paragraphs (f) (1) through (3) of this section. This rule applies only to the pending applications by Duke Power Company (Perkins Nuclear Station Units 1, 2 and 3), Houston Lighting & Power Company (Allens Creek Nuclear Generating Station, Unit 1), Portland General Electric Company (Pebble Springs Nuclear Plant, Units 1 and 2), Public Service Company of Oklahoma (Black Fox Station, Units 1 and 2), Puget Sound Power & Light Company (Skagit/Hanford Nuclear Power Project, Units 1 and 2), and Offshore Power Systems (License to Manufacture Floating Nuclear Plants). The number of units that will be specified in the manufacturing license, if issued, will be that number whose start of manufacture, as defined in the license application, can practically begin within a ten-year period commencing on the date of issuance of the manufacturing license, but in no event will that number be in excess of ten. The manufacturing license will require the plant design to be updated no later than five years after its approval. Paragraphs (f) (1)(xii), (2)(ix), and (3)(v) of this section, pertaining to hydrogen control measures, must be met by all applicants covered by this rule. However, the Commission may decide to impose additional requirements and the issue of whether compliance with these provisions, together with 10 CFR 50.44 and Criterion 50 of appendix A to 10 CFR part 50, is sufficient for issuance of the manufacturing license may be considered in the manufacturing license proceeding. In addition, each applicant for a design certification, design approval, combined license, or manufacturing license under part 52 of this chapter shall demonstrate compliance with the technically relevant portions of the requirements in paragraphs (f)(1) through (3) of this section, except for paragraphs (f)(1)(xii), (f)(2)(ix), and (f)(3)(v).

(2) To satisfy the following requirements, the application shall provide sufficient information to demonstrate that the required actions will be satisfactorily completed by the operating license stage. This information is of the type customarily required to satisfy 10 CFR 50.35(a)(2) or to address unresolved generic safety issues.

⁵ The applicant may provide information required by this paragraph in the form of a discussion, with specific references, of similarities to and differences from, facilities of similar design for which applications have previously been filed with the Commission.

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

(xxv) Provide an onsite Technical Support Center, an onsite Operational Support Center, and an Emergency Operations Facility. (III.A.1.2).

Deleted: for construction permit applications only, a nearsite

Comment: Rulemaking Plan Attachment 6

§ 50.47 Emergency plans.

(a)(1) Except as provided in paragraph (d) of this section, no initial operating license for a nuclear power reactor will be issued unless a finding is made by the NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. No finding under this section is necessary for issuance of a renewed nuclear power reactor operating license.

(2) The NRC will base its finding on a review of the Federal Emergency Management Agency (FEMA) findings and determinations as to whether State and local emergency plans are adequate and whether there is reasonable assurance that they can be implemented, and on the NRC assessment as to whether the applicant's onsite emergency plans are adequate and whether there is reasonable assurance that they can be implemented. A FEMA finding will primarily be based on a review of the plans. Any other information already available to FEMA may be considered in assessing whether there is reasonable assurance that the plans can be implemented. In any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on questions of adequacy and implementation capability.

(b) The onsite and, except as provided in paragraph (d) of this section, offsite emergency response plans for nuclear power reactors must meet the following standards:

(1) Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

(2) On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

(3) Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

Comment: Rulemaking Plan Attachment 6

Deleted: near-site

Draft Preliminary Rule Language Emergency Preparedness Rulemaking February, 2008

(4) A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

(5) Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

(6) Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

(7) Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

(8) Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

(9) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

(10) A range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate. **Evacuation time estimates have been developed and must be updated on a periodic basis.** Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

Comment: Rulemaking Plan
Attachment 8

(11) Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

(12) Arrangements are made for medical services for contaminated injured individuals.

(13) General plans for recovery and reentry are developed.

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

(14) Periodic exercises are conducted to evaluate major portions of emergency response capabilities, and periodic drills are conducted to develop and maintain key skills, and to critique performance. Weaknesses or deficiencies identified as a result of exercises or drills are corrected. Periodic exercises must demonstrate response to a wide spectrum of accidents including but not limited to those accidents with and without core damage, a radiological release, and hostile action¹ against the site and those that allow some realistic simulated actions to mitigate the accident and/or the radiological release.

Comment: Rulemaking Plan Attachment 11, SRM June 29, 2006

Deleted: (will be)

Deleted: (will be)

Deleted: Any

Deleted: (will be)

(15) Radiological emergency response training is provided to those who may be called on to assist in an emergency.

(16) Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

(d) Notwithstanding the requirements of paragraphs (a) and (b) of this section, and except as specified by this paragraph, no NRC or FEMA review, findings, or determinations concerning the state of offsite emergency preparedness or the adequacy of and capability to implement State and local or utility offsite emergency plans are required prior to issuance of an operating license authorizing only fuel loading or low power testing and training (up to 5 percent of the rated power). Insofar as emergency planning and preparedness requirements are concerned, a license authorizing fuel loading and/or low power testing and training may be issued after a finding is made by the NRC that the state of onsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The NRC will base this finding on its assessment of the applicant's onsite emergency plans against the pertinent standards in paragraph (b) of this section and appendix E. Review of applicant's emergency plans will include the following standards with offsite aspects:

(1) Arrangements for requesting and effectively using offsite assistance on site have been made, arrangements to accommodate State and local staff at the licensee's Emergency Operations Facility have been made, and other organizations capable of augmenting the planned onsite response have been identified.

Comment: Rulemaking Plan Attachment 6

Deleted: near-site

¹ A hostile action is an act directed toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, takes hostages, and/or intimidates the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force.

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

(2) Procedures have been established for licensee communications with State and local response organizations, including initial notification of the declaration of emergency and periodic provision of plant and response status reports.

(3) Provisions exist for prompt communications among principal response organizations to offsite emergency personnel who would be responding onsite.

(4) Adequate emergency facilities and equipment to support the emergency response onsite are provided and maintained.

(5) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use onsite.

(6) Arrangements are made for medical services for contaminated and injured onsite individuals.

(7) Radiological emergency response training has been made available to those offsite who may be called to assist in an emergency onsite.

§ 50.54 Conditions of licenses

(q) Emergency Plans

(1) Definitions for the purpose of this section:

(i) *Change* means an action that results in modification or addition to, or removal from, the licensee's emergency plans or the resources, capabilities, and methods identified in these plans, and affects an emergency planning function. All such changes are subject to the provisions of this section except where the applicable regulations establish specific criteria for accomplishing a particular change.

(ii) *Emergency plan* means the document(s), prepared and maintained by the licensee, that identify and describe the licensee's methods for maintaining and performing emergency planning functions. An emergency plan includes the plans as originally approved by the NRC and all subsequent changes made by the licensee with, and without, prior NRC review and approval pursuant to § 50.54(q).

(iii) *Emergency planning function* means a capability or resource necessary to prepare for and, respond to, a radiological emergency, as set forth in the elements of section IV of appendix E to this part and, for nuclear power reactors, the planning standards of § 50.47(b).

Comment: Rulemaking Plan Attachment 3

Deleted: (q) A licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in § 50.47(b) and the requirements in appendix E of this part. A licensee authorized to possess and/or operate a research reactor or a fuel facility shall follow and maintain in effect emergency plans which meet the requirements in appendix E to this part. The licensee shall retain the emergency plan and each change that decreases the effectiveness of the plan as a record until the Commission terminates the license for the nuclear power reactor. The nuclear power reactor licensee may make changes to these plans without Commission approval only if the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of § 50.47(b) and the requirements of appendix E to this part. The research reactor and/or the fuel facility licensee may make changes to these plans without Commission approval only if these changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the requirements of appendix E to this part. This nuclear power reactor, research reactor, or fuel facility licensee shall retain a record of each change to the emergency plan made without prior Commission approval for a period of three years from the date of the change. Proposed changes that decrease the effectiveness of the approved emergency plans may not be implemented without application to and approval by the Commission. The licensee shall submit, as specified in § 50.4, a report of each proposed change for approval. If a change is made without approval, the licensee shall submit, as specified in § 50.4, a report of each change within 30 days after the change is made.¶

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

(iv) *Reduction in effectiveness* means a change in an emergency plan that results in the degradation of the licensee's capability to perform an emergency planning function in the event of a radiological emergency.

(2) Each holder of a license under 10 CFR parts 50, 52 subpart C, or 54, shall follow and maintain the effectiveness of an emergency plan which meet the requirements in appendix E to this part and, for nuclear power reactors, the planning standards of § 50.47(b).

(3) Each holder of a license under 10 CFR parts 50, 52 subpart C, or 54, may make changes to its emergency plan without NRC approval only if the changes do not reduce the effectiveness of the plan and the plan, as changed, continue to meet the requirements in appendix E to this part and, for nuclear power reactors, the planning standards of § 50.47(b). The following changes are not considered to reduce the effectiveness of the emergency plan:

(i) Changes involving only administrative improvements and clarifications, typographical or editorial items, or updates to telephone numbers or addresses.

(ii) Changes to organization names or position titles, provided that functional relationships, authorities, and responsibilities established in the licensee's emergency plan are not changed;

(iii) Replacement of assessment, communication, monitoring, or personal protective equipment identified in the emergency plan with like equipment of equal or better reliability, capability, performance, and operability;

(iv) Changes to emergency action level (EAL) thresholds to conform with plant configuration changes (e.g., replacement instrument has different readout scale than the original instrument referenced in the EAL, technical specification referenced by EAL was changed, re-calculation of effluent radiation monitor thresholds due to plant configuration changes), provided that the approved basis of the EAL threshold continues to be met.

(v) Changes to a licensee-maintained public alert and notification system (ANS) as described in the system design report approved by the Federal Emergency Management Agency (FEMA), including testing and maintenance provisions therein, provided that significant changes were reviewed and approved by FEMA pursuant to 44 CFR 350.14.

(vi) Changes to emergency response organization training and exercise programs, provided that the scope, content, frequency, and acceptance criteria of these programs as described in the approved emergency plans are not changed.

(vii) Relocation to a lower-tiered document of emergency plan information that identifies or describes the licensee's methods for complying with the

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

requirements in appendix E to this part and, for nuclear power reactors, the planning standards of § 50.47(b), provided that the relocated information remains subject to the requirements of this section.

(4) The changes to a licensee's emergency plan that reduce the effectiveness of the plans as defined in § 50.54(q)(1)(iv) may not be implemented without prior approval by the NRC. A licensee desiring to make such a change shall submit an application for an amendment to the license pursuant to § 50.90. The request must include all emergency plan pages affected by that change and must be accompanied by a forwarding letter identifying the change, the reason for the change, and the basis for concluding that the licensee's emergency plan, as revised, continue to meet the requirements in appendix E to this part and, for nuclear power reactors, the planning standards of § 50.47(b).

(5) The licensee shall retain a record of each change to the emergency plan made without prior NRC approval for a period of three years from the date of the change and shall submit, as specified in § 50.4, a report of each such change within 30 days after the change is made.

(6) The licensee shall retain the emergency plan and each change for which prior NRC approval was obtained pursuant to § 50.54(q)(4) as a record until the Commission terminates the license for the nuclear power reactor.

Draft Preliminary Rule Language Emergency Preparedness Rulemaking February, 2008

Appendix E to Part 50 – Emergency Planning and Preparation for Production and Utilization Facilities

IV. Content of Emergency Plans

The applicant's emergency plans shall contain, but not necessarily be limited to, information needed to demonstrate compliance with the elements set forth below, i.e., organization for coping with radiation emergencies, assessment action, activation of emergency organization, notification procedures, emergency facilities and equipment, training, maintaining emergency preparedness, and recovery. In addition, the emergency response plans submitted by an applicant for a nuclear power reactor operating license shall contain information needed to demonstrate compliance with the standards described in § 50.47(b), and they will be evaluated against those standards. The nuclear power reactor operating license applicant shall also provide an analysis of the time required to evacuate and for taking other protective actions for various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations. **Evacuation time estimates (ETEs) and updates to the ETEs must be provided to State and local governmental authorities for use in developing protective action strategies. The licensee or applicant shall review the infrastructure and demographic changes that occur within the EPZ and if the cumulative changes impact the most recently submitted ETE by at least 10%, then the ETE must be updated to accommodate these changes.**

Comment: Rulemaking Plan Attachment 8

A. Organization

The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization and the means for notification of such individuals in the event of an emergency. Specifically, the following shall be included:

1. A description of the normal plant operating organization.
2. A description of the onsite emergency response organization with a detailed discussion of:
 - a. Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency;
 - b. Plant staff emergency assignments;
 - c. Authorities, responsibilities, and duties ~~of~~ an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.

Comment: Language clean-up

Deleted: on

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

3. A description, by position and function to be performed, of the licensee's headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.

4. Identification, by position and function to be performed, of persons within the licensee organization who will be responsible for making offsite dose projections, and a description of how these projections will be made and the results transmitted to State and local authorities, NRC, and other appropriate governmental entities.

5. Identification, by position and function to be performed, of other employees of the licensee with special qualifications for coping with emergency conditions that may arise. Other persons with special qualifications, such as consultants, who are not employees of the licensee and who may be called upon for assistance for emergencies shall also be identified. The special qualifications of these persons shall be described.

6. A description of the local offsite services to be provided in support of the licensee's emergency organization.

7. Identification of, and assistance expected from, appropriate State, local, and Federal agencies with responsibilities for coping with emergencies. **Before relying on offsite resources (e.g., local law enforcement, firefighting, medical assistance) licensees shall determine whether these resources have been assigned collateral duties in offsite emergency plans that would limit their availability to respond to the nuclear power plant site, including response to a hostile action event at the plant.**

Comment: Rulemaking Plan Attachment 9

8. Identification of the State and/or local officials responsible for planning for, ordering, and controlling appropriate protective actions, including evacuations when necessary.

9. **Assurance that on-shift personnel assigned emergency plan implementation functions are not assigned collateral responsibilities that would prevent the timely performance of their assigned emergency plan functions.**

Comment: Rulemaking Plan Attachment 2

B. Assessment Actions

The means to be used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The emergency action levels shall be based on in- plant conditions and instrumentation in addition to onsite and offsite monitoring.

These action levels must include hostile action events expected to adversely affect the plant. These initial emergency action levels shall be discussed and agreed on by the applicant or licensee and state and local governmental authorities, and approved by the NRC. Thereafter, emergency action levels shall be reviewed with the State and local

Comment: Rulemaking Plan Attachment 4

Draft Preliminary Rule Language Emergency Preparedness Rulemaking February, 2008

governmental authorities on an annual basis. A revision to an emergency action level must be approved by the NRC before implementation if:

(1) The licensee is changing from one emergency action level scheme to another emergency action level scheme (e.g., a change from an emergency action level scheme based on NUREG-0654 to a scheme based upon NUMARC/NESP-007 or NEI-99-01); or

~~(2) The emergency action level revision reduces the effectiveness of the emergency plan.~~

A licensee shall submit each request for NRC approval of the proposed emergency action level change as specified in § 50.4. If a licensee makes a change to an EAL that does not require NRC approval, the licensee shall submit, as specified in § 50.4, a report of each change made within 30 days after the change is made.

C. Activation of Emergency Organization

1. The entire spectrum of emergency conditions that involve the alerting or activating of progressively larger segments of the total emergency organization shall be described. The communication steps to be taken to alert or activate emergency personnel under each class of emergency shall be described. Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described. The existence, but not the details, of a message authentication scheme shall be noted for such agencies. The emergency classes defined shall include: (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency. These classes are further discussed in NUREG-0654; FEMA-REP- 1.

~~2. An applicant or a licensee shall establish and maintain the capability to assess, classify, and declare an emergency condition promptly within 15 minutes after the availability of indications to plant operators that an emergency action level has been, or may be, exceeded. This 15-minute criterion must not be construed as a grace period to attempt to restore plant conditions to avoid declaring an emergency action due to an EAL that has been exceeded. This 15-minute criterion must not be construed as preventing implementation of response actions deemed by the licensee to be necessary to protect health and safety provided that any delay in classification does not deny the State and local authorities the opportunity to implement measures necessary to protect the public health and safety.~~

D. Notification Procedures

1. Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should

Comment: Rulemaking Plan Attachment 3

Deleted: (2) The licensee is proposing an alternate method for complying with the regulations; or

Deleted: 3

Deleted: decreases

Comment: Paragraph numbering change to accommodate addition of 2. below.

Comment: Rulemaking Plan Attachment 5

Draft Preliminary Rule Language Emergency Preparedness Rulemaking February, 2008

they become necessary, shall be described. This description shall include identification of the appropriate officials, by title and agency, of the State and local government agencies within the EPZs.¹

2. Provisions shall be described for yearly dissemination to the public within the plume exposure pathway EPZ of basic emergency planning information, such as the methods and times required for public notification and the protective actions planned if an accident occurs, general information as to the nature and effects of radiation, and a listing of local broadcast stations that will be used for dissemination of information during an emergency. Signs or other measures shall also be used to disseminate to any transient population within the plume exposure pathway EPZ appropriate information that would be helpful if an accident occurs.

3. A licensee shall have the capability to notify responsible State ~~or~~ local governmental agencies within 15 minutes after declaring an emergency. The licensee shall demonstrate that the State/local officials have the capability to make a public notification decision promptly on being informed by the licensee of an emergency condition. ~~Before to initial operation greater than 5 percent of rated thermal power of the first reactor at a site,~~ each nuclear power reactor licensee shall demonstrate that administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ. The four-month period in 10 CFR 50.54(s)(2) for the correction of emergency plan deficiencies ~~applies~~ to the correction of deficiencies identified during the initial installation and testing of the prompt public notification systems as well as those deficiencies discovered thereafter. The design objective of the prompt public notification system shall be to have the capability to essentially complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes. The use of this notification capability will range from immediate notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available for the State and local governmental

Comment: Language clean-up

Deleted: and

Deleted: By February 1, 1982

Comment: Language clean-up

Comment: Language clean-up

Deleted: shall not apply

Deleted: initial installation of this public notification system that is required by February 1, 1982. The four-month period will apply to

¹ EPZs for power reactors are discussed in NUREG-0396; EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants," December 1978. The size of the EPZs for a nuclear power plant shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. Generally, the plume exposure pathway EPZ for nuclear power plants with an authorized power level greater than 250 MW thermal shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius.

Draft Preliminary Rule Language Emergency Preparedness Rulemaking February, 2008

officials to make a judgment whether or not to activate the public notification system. ~~The licensee shall demonstrate that the State or local officials have both the administrative and physical means for a backup method of public notification capable of being used in the event the primary method is unavailable. The backup method does not need to meet the 15-minute design objective for the primary prompt public notification system.~~ Where there is a decision to activate the notification system, the State and local officials will determine whether to activate the entire notification system simultaneously or in a graduated or staged manner. The responsibility for activating such a public notification system shall remain with the appropriate governmental authorities.

Comment: Rulemaking Plan Attachment 1

E. Emergency Facilities and Equipment

Adequate provisions shall be made and described for emergency facilities and equipment, including:

1. Equipment at the site for personnel monitoring;
2. Equipment for determining the magnitude of and for continuously assessing the impact of the release of radioactive materials to the environment;
3. Facilities and supplies at the site for decontamination of onsite individuals;
4. Facilities and medical supplies at the site for appropriate emergency first aid treatment;
5. Arrangements for the services of physicians and other medical personnel qualified to handle radiation emergencies on-site;
6. Arrangements for transportation of contaminated injured individuals from the site to specifically identified treatment facilities outside the site boundary;
7. Arrangements for treatment of individuals injured in support of licensed activities on the site at treatment facilities outside the site boundary;
8. A licensee onsite technical support center and a licensee emergency operations facility from which effective direction can be given and effective control can be exercised during an emergency; ~~and an alternate facility (or facilities) for use when onsite emergency facilities may not be safely accessed that is capable of performing the following functions: staging of onsite responders, event classification, offsite notifications, and repair team preparation.~~
9. At least one onsite and one offsite communications system; each system shall have a backup power source.

Comment: Rulemaking Plan Attachment 7

Deleted: near-site

Draft Preliminary Rule Language Emergency Preparedness Rulemaking February, 2008

All communication plans shall have arrangements for emergencies, including titles and alternates for those in charge at both ends of the communication links and the primary and backup means of communication. Where consistent with the function of the governmental agency, these arrangements will include:

- a. Provision for communications with contiguous State/local governments within the plume exposure pathway EPZ. Such communications shall be tested monthly.
- b. Provision for communications with Federal emergency response organizations. Such communications systems shall be tested annually.

~~c. Provision for communications among the nuclear power reactor control room, the onsite technical support center, and the emergency operations facility; and among the nuclear facility, the principal State and local emergency operations centers, and the field assessment teams. Such communications systems shall be tested annually.~~

Comment: Rulemaking Plan Attachment 6

Deleted: near-site

~~d. Provisions for communications by the licensee with NRC Headquarters and the appropriate NRC Regional Office Operations Center from the nuclear power reactor control room, the onsite technical support center, and the emergency operations facility. Such communications shall be tested monthly.~~

Comment: Rulemaking Plan Attachment 6

Deleted: near-site

F. Training.

1. The program to provide for: (a) The training of employees and exercising, by periodic drills, of radiation emergency plans to ensure that employees of the licensee are familiar with their specific emergency response duties, and (b) The participation in the training and drills by other persons whose assistance may be needed in the event of a radiation emergency shall be described. This shall include a description of specialized initial training and periodic retraining programs to be provided to each of the following categories of emergency personnel:

- i. Directors and/or coordinators of the plant emergency organization;
- ii. Personnel responsible for accident assessment, including control room shift personnel;
- iii. Radiological monitoring teams;
- iv. Fire control teams (fire brigades);
- v. Repair and damage control teams;
- vi. First aid and rescue teams;
- vii. Medical support personnel;

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

viii. Licensee's headquarters support personnel;

ix. Security personnel.

In addition, a radiological orientation training program shall be made available to local services personnel; e.g., local emergency services/Civil Defense, local law enforcement personnel, local news media persons.

2. The plan shall describe provisions for the conduct of emergency preparedness exercises as follows: Exercises shall test the adequacy of timing and content of implementing procedures and methods, test emergency equipment and communications networks, test the public notification system, and ensure that emergency organization personnel are familiar with their duties.³

Comment: Rulemaking Plan
Attachment 11, SRM June 29, 2006

a. A full participation exercise⁴ which tests as much of the licensee, State, and local emergency plans as is reasonably achievable without mandatory public participation shall be conducted for each site at which a power reactor is located. Licensees shall submit exercise scenarios for NRC staff review and approval

(i) For an operating license issued under this part, this exercise must be conducted within two years before the issuance of the first operating license for full power (one authorizing operation above 5 percent of rated power) of the first reactor and shall include participation by each State and local government within the plume exposure pathway EPZ and each state within the ingestion exposure pathway EPZ. If the full participation exercise is conducted more than 1 year prior to issuance of an operating license for full power, an exercise which tests the licensee's onsite emergency plans must be conducted within one year before issuance of an operating license for full power. This exercise need not have State or local government participation.

(ii) For a combined license issued under part 52 of this chapter, this exercise must be conducted within two years of the scheduled date for initial loading of fuel. If the first full participation exercise is conducted more than one year before the scheduled date for initial loading of fuel, an exercise which tests the licensee's onsite emergency plans must

³ Use of site specific simulators or computers is acceptable for any exercise.

⁴ "Full participation" when used in conjunction with emergency preparedness exercises for a particular site means appropriate offsite local and State authorities and licensee personnel physically and actively take part in testing their integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant. "Full participation" includes testing major observable portions of the onsite and offsite emergency plans and mobilization of state, local and licensee personnel and other resources in sufficient numbers to verify the capability to respond to the accident scenario.

Draft Preliminary Rule Language Emergency Preparedness Rulemaking February, 2008

be conducted within one year before the scheduled date for initial loading of fuel. This exercise need not have State or local government participation. If DHS identifies one or more deficiencies in the state of offsite emergency preparedness as the result of the first full participation exercise, or if the Commission finds that the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency, the provisions of §50.54(gg) apply.

(iii) For a combined licensee issued under part 52 of this chapter, if the applicant currently has an operating reactor at the site, an exercise, either full or partial participation,⁵ shall be conducted for each subsequent reactor constructed on the site. This exercise may be incorporated in the exercise requirements of Sections IV.F.2.b. and c. in this appendix. If DHS identifies one or more deficiencies in the state of offsite emergency preparedness as the result of this exercise for the new reactor, or if the Commission finds that the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency, the provisions of §50.54(gg) apply.

b. Each licensee at each site shall conduct an exercise of its onsite emergency plan every 2 years. The exercise may be included in the full participation biennial exercise required by paragraph 2.c. of this section **and, if so, shall be submitted to the staff for review and approval.** In addition, the licensee shall take actions necessary to ensure that adequate emergency response capabilities are maintained during the interval between biennial exercises by conducting drills, including at least one drill involving a combination of some of the principal functional areas of the licensee's onsite emergency response capabilities. The principal functional areas of emergency response include activities such as management and coordination of emergency response, accident assessment, protective action decisionmaking, and plant system repair and corrective actions. During these drills, activation of all of the licensee's emergency response facilities (Technical Support Center (TSC), Operations Support Center (OSC), and the Emergency Operations Facility (EOF)) would not be necessary, licensees would have the opportunity to consider accident management strategies, supervised instruction would be permitted, operating staff **in all exercised facilities** would have the opportunity to resolve problems (success paths) rather than have controllers intervene, and the drills **must focus on the onsite exercise** training objectives.

Deleted: could

c. Offsite plans for each site shall be exercised biennially with full participation by each offsite authority having a role under the radiological response plan. Where the offsite authority has a role under a radiological response plan for more than one site, it shall fully participate in one exercise every two years and shall, at least, partially participate⁵

⁵"Partial participation" when used in conjunction with emergency preparedness exercises for a particular site means appropriate offsite authorities shall actively take part in the exercise sufficient to test direction and control functions; i.e., (a) protective action decision making related to emergency action levels, and (b) communication capabilities among affected State and local authorities and the licensee.

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

in other offsite plan exercises in this period. If two different licensees whose licensed facilities are located either on the same site or on adjacent, contiguous sites, and that share most of the elements defining co-located licensees,⁶ each licensee shall:

- (1) Conduct an exercise biennially of its onsite emergency plan; and
- (2) Participate quadrennially in an offsite biennial full or partial participation exercise; and
- (3) Conduct emergency preparedness activities and interactions in the years between its participation in the offsite full or partial participation exercise with offsite authorities, to test and maintain interface among the affected State and local authorities and the licensee. Co-located licensees shall also participate in emergency preparedness activities and interaction with offsite authorities for the period between exercises.

d. A State should fully participate in the ingestion pathway portion of exercises at least once every six years. In States with more than one site, the State should rotate this participation from site to site.

e. Licensees shall enable any State or local Government located within the plume exposure pathway EPZ to participate in the licensee's drills when requested by such State or local Government.

f. Remedial exercises will be required if the emergency plan is not satisfactorily tested during the biennial exercise, such that NRC, in consultation with FEMA, cannot 1) find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency or 2) determine that key ERO skills have been maintained. The extent of State and local participation in remedial exercises must be sufficient to show that appropriate corrective measures have been taken regarding the elements of the plan not properly tested in the previous exercises.

6 Co-located licensees are two different licensees whose licensed facilities are located either on the same site or on adjacent, contiguous sites, and that share most of the following emergency planning and siting elements:

- a. plume exposure and ingestion emergency planning zones,
- b. offsite governmental authorities,
- c. offsite emergency response organizations,
- d. public notification system, and/or
- e. emergency facilities

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

g. All training, including exercises, shall provide for formal critiques in order to identify weak or deficient areas that need correction. Any weaknesses or deficiencies that are identified ~~during a training evolution, exercises, or drills must~~ be corrected.

Deleted: shall

h. The participation of State and local governments in an emergency exercise is not required to the extent that the applicant has identified those governments as refusing to participate further in emergency planning activities, pursuant to 10 CFR 50.47(c)(1). In such cases, an exercise shall be held with the applicant or licensee and such governmental entities as elect to participate in the emergency planning process.

~~i. Drills and exercises conducted in accordance with this section must utilize scenarios which avoid anticipatory responses associated with preconditioning of participants by incorporating a wide spectrum of releases (ranging from minimal to large releases) and events, including hostile action events. These scenarios must emphasize coordination among essential decision-makers onsite and offsite.~~

Comment: Rulemaking Plan Attachment 11, SRM June 29, 2006

~~j. Licensee exercises conducted in accordance with paragraph 2 of this section must utilize scenarios with the following elements in each biennial exercise planning cycle: (1) hostile action directed at the plant site, (2) in-plant repairs with site not fully secured from hostile action that, if properly implemented, can successfully mitigate core damage or prevent containment failure, (3) a minimal radiological release that does not require public protective actions, (4) at a minimum, an initial classification at a Site Area Emergency or rapid (i.e., within minutes) escalation from an Alert to a Site Area Emergency, (5) implementation of mitigation strategies using equipment and procedures developed to respond to the loss of large areas of the plant, and (6) other elements that vary exercise challenges and avoid preconditioning or anticipatory responses. These exercises must be included in the full participation biennial exercise required by paragraph 2.c. of this section. Each biennial exercise must proceed to the General Emergency level.~~

Comment: Rulemaking Plan Attachment 11, SRM June 29, 2006

G. Maintaining Emergency Preparedness

Provisions to be employed to ensure that the emergency plan, its implementing procedures, and emergency equipment and supplies are maintained up to date shall be described.

H. Recovery

Criteria to be used to determine when, following an accident, reentry of the facility would be appropriate or when operation could be resumed shall be described.

~~i. Onsite Protective Actions During Hostile Action Events~~

Comment: Rulemaking Plan Attachment 10

~~The range of protective actions developed for the plume exposure pathway EPZ for emergency workers must include specific actions to protect onsite personnel during hostile action events.~~

**Draft Preliminary Rule Language
Emergency Preparedness Rulemaking
February, 2008**

DRAFT